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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,576	07/02/2001	Richard J. Markle	2000.071100	1249
23720	7590	01/16/2004	EXAMINER	
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			NGUYEN, SANG H	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

00 897,676

Examiner

Song H. Nguyen

Applicant(s)

MARKLE ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION

- Extension of time may be available under the provisions of 37 C.F.R. 1.136(a), and even, however, may shortly be timely filed after 30 days MPEP from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory maximum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire 3 months MPEP from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will result in the application being **ABANDONED** (35 U.S.C. 1.131).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 C.F.R. 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 08 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s): ☐ is/are withdrawn from consideration.
- 5) ☐ Claim(s) is/are allowed.
- 6) ☐ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not need to file a response to the objection to the drawing(s) if the drawing(s) is/are objected to. See 37 C.F.R. 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is/are objected to. See 37 C.F.R. 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 C.F.R. 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 C.F.R. 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449, Paper Notice)
- 4) ☐ Interview Summary (PTO-0413, Paper Notice)
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

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DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to Amendments filed on 11/08/03 have been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent iness -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 52-53 and 57-62 are rejected under 35 U.S.C. 102(b) as being anticipated by Jost et al (U.S. Patent No. 5,686,747).

(See the reasons as indicated in the previous office action dated July 10, 2003).

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-72 are rejected under 35 U.S.C. 102(a) as being anticipated by Jun et al (U.S. Patent No. 6,366,688).

(See the reasons as indicated in the previous office action dated July 10, 2003).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jost et al (U.S. Patent No. 5,686,747).

(See the reasons as indicated in the previous office action dated July 10, 2003).

Response to Arguments

7. Applicant's arguments filed 11-08-03 have been fully considered but they are not persuasive.

Applicant argued that Jost et al (5,686,747) and or Jun et al (6,366,688) do and or does not disclosed the test structure comprising a plurality of the lines and a plurality of contact openings defined in the lines and light reflected from the contact openings is measured to determining a dimension of the contact openings based on the measure reflection profile.

This argument is not persuasive. Applicant does not proved the different structures and purposes between the test structure and the semiconductor wafer fragment (10 of figure 1) as disclosed in the Jost et al reference and or the detection or inspection device for contact hole openings on the semiconductor wafer (110 of figure 1, or figures 15 and 17-18) Jun et al reference, since all the features recited in the test structure and the semiconductor wafer fragment and or the detection or inspection device for contact hole openings on the semiconductor wafer have the same results for forming and testing patterned line with contact openings on the wafer. Even if the test structure is different from the semiconductor wafer fragment and or the detection or inspection device for contact hole openings on the semiconductor wafer, then it is considered

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in view obvious, because the term "the test structure" is recited in the preamble but not in the body of claims.

In response to applicant's argument that, page 20, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

As stated in the previous office action, Jost et al discloses a test structure considered to be a semiconductor wafer fragment (10 of figure 1) comprising a plurality of lines (12,14,16 of figures 1-2) formed on a silicon semiconductor substrate (11 of figure 2) and a plurality of contact openings (32,34 of figure 2) defined in the lines (12,14 of figure 2), wherein the plurality of lines (12,14,16 of figure 2) being defining in a first layer is an insulative layer and the insulative layer comprises at least one of silicon dioxide, silicon nitride, silicon oxynitride, and silicon rich oxide (col.3 lines 43-51).

As stated in the previous office action, Jan et al discloses a wafer (110 of figure 1) having a test structure (figures 15 and 17-18) comprising a plurality of contact openings is considered to be contact holes (153 of figures 19-20) defined in a horizontal and vertical mesh lines (150,152 of figures 19-20) and determining a dimension of the contact opening (153 of figure 19 of figure 4

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and col.2 lines 37-49 and col.3 lines 10-32) based on the reflection profile (col.3 lines 54-67 and col.4 lines 1-9). See figures 1-32.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (703)308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

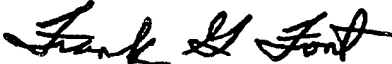
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

SN

Nguyen-sn

Jul 16, 2003


Frank G. Font
Supervisory Patent Examiner
Art Unit 2877
Technology Center 2800